Addendum 2

PROGRAM REPORT

TMDL Program

Section 303(d) of the Clean Water Act requires states to develop a list of impaired water bodies and a priority ranking for addressing impairments. The list must be updated every two years and submitted to US EPA for approval. In California, the State and Regional Board's are responsible for developing and submitting the lists to US EPA. The TMDL Program includes work associated with developing the lists of impaired water bodies required by federal TMDL regulations and work associated with developing and implementing TMDLs or other approaches for addressing impaired waters.

TMDL Program Background and Resources
The Regional Board has been putting together lists of impaired water bodies since the basin plan was originally adopted in 1975. Over the years, many identified impairments were addressed, especially those that were caused by municipal waste water treatment plant discharges (a state and federal grant program was initiated in about 1975). However, many of the impaired water bodies on the current list are caused primarily by nonpoint source discharges and stormwater discharges. Until relatively recently, significant resources have not been available to try to address these impairments.

In 1997, in response to litigation and threats of litigation, US EPA launched several initiatives and policies to move TMDL development along and at the same time provided some limited funding (1-2 staff) for us to start working on TMDLs. By 1998, our federal allocation had increased to about 5 staff. In 1999, the State was successful in putting through a budget change proposal to support TMDL development. For the past several years the Regional Board and State Board federal and state allocations have remained relatively constant. The statewide TMDL program now includes about 115 staff, 16 of them being allocated to the Central Valley Region. In addition to staff resources, we receive an annual allocation for monitoring and data collection associated with TMDL development. We also use resources from other programs (i.e., Bay Delta Authority and Sacramento River Watershed Program) to augment our TMDL program.

There is a TMDL roundtable group that works on TMDL issues. The roundtable has developed a TMDL implementation guidance policy document that explains how TMDLs are developed and implemented in California. This policy document is under review at State Board. In addition, State Board has established an advisory committee to provide input on listing issues and TMDL development

Listing Process
Over the years the list has been developed in different ways. Sometimes the Regional Board adopted the list and State Board approved the results with minimum review. Other times, State Board took the lead. In the past few listing cycles, list development has become a formal process. The 303(d) list of impaired waters currently in effect was developed by Regional Board staff, adopted by the State Board based upon recommendations made by the Regional Board, and approved by EPA in July 2003 (referred to as the 2002 list). The State Board, with assistance from EPA's consultant TetraTech, has taken the lead on development of the 2004 list; Regional Board involvement in the 2004 listing process has been minimal. The 2004 list is being developed using new listing policy guidelines that were recently adopted by State Board. Work will soon need to begin on the development of the 2006 list to allow sufficient time for the solicitation of data, staff technical review of the data, and the public process. Although the Regional Board will once again take a lead role in the development of the 2006 list, some of the work may be performed by outside contractors. The Central Valley Region currently has over 100 water bodies listed as impaired (over 250 water body-pollutant combinations), including virtually all of our mainstream rivers and the Delta. The full current list can be found at: http://www.swrcb.ca.gov/tmdl/docs/2002reg5303dlist.pdf

TMDL Requirements
The Clean Water Act requires that TMDLs (or an equivalent approach) be developed to address impairments. TMDLs must include the following elements:

- Numeric targets
- Source analysis
- Determination of carrying capacity of water body
- Establishment of load allocations for sources in the watershed
- Public process

TMDL requirements can be included directly in NPDES permits when one action by the Board addresses all the significant loads and the loads are all from point source discharges. More often, TMDLs involve loads from a combination of point and nonpoint sources and they are established through Basin Plan amendments. When TMDLs are adopted as part of Basin Plan amendments, Porter-Cologne requires that we also establish an implementation program to assure that water quality objectives are achieved.

Status of TMDL Development and Implementation
TMDL resources have been directed towards the largest and most intractable surface water quality problems in the Region: salinity, selenium, pesticides, mercury, DO and nutrients. These include most of the listed waterbody-pollutant combinations that are identified as high priority on the 2002 list of impaired waters. They are complicated and contentious and all have a large nonpoint source component.

TMDLs have been completed for selenium in Salt Slough, the Grasslands Marshes, and the San Joaquin River; salinity and boron in the San Joaquin River; copper, zinc and cadmium in the upper Sacramento River; mercury in Clear Lake, diazinon in the Sacramento and Feather River and diazinon and chlorpyrifos in six Sacramento area urban creeks. Before June 2005, we anticipate bringing to the Board for their consideration, TMDLs for dissolved oxygen in the Deep Water Ship Channel, and mercury in Cache Creek. A TMDL for diazinon and chlorpyrifos in the Delta and San Joaquin River will be presented to the Board later in 2005. A nutrient TMDL for Clear Lake will be presented to the Board in December 2005, although this could be delayed because preparation of the technical TMDL report by EPA's consultant has been delayed. Staff is also planning Board workshops for mercury in Cache Creek and the Delta in 2005 and the Delta TMDL in late 2005 or early 2006.

Work in the next few years will focus on:

- refining and updating TMDLs for salinity and dissolved oxygen in the San Joaquin River
- developing TMDLs for mercury in the Delta and its upstream tributaries and for dissolved oxygen impairments in Stockton area sloughs and South Delta channels
- developing a comprehensive approach for addressing pesticide impairments throughout the Sacramento and San Joaquin Valley
- implementing TMDLs already adopted

TMDL Issues
TMDLs that are developed include implementation programs that will require varying degrees of oversight. If TMDL resources are used for the oversight, then fewer resources are available to develop new TMDLs. Whenever possible, staff has coordinated with other programs (irrigated lands waiver, NPDES, stormwater) to develop TMDL implementation requirements that fit into existing regulatory frameworks (permits or waivers). However, for some TMDLs, such as for mercury, there are not other existing programs to rely upon. The implementation plans for some TMDLs (i.e., salt and dissolved oxygen) require on-going staff oversight to further develop some of the components of the TMDL. All of the Regions are currently struggling with the TMDL implementation resource issue.

The length of time and amount of resources needed to develop and adopt TMDLs is a continuing issue. It is difficult to establish a benchmark for satisfactory progress since there is such a great variability in complexity of the TMDLs that have been developed and adopted by the Regional Boards; the TMDLs completed or under development in our Region are complex and cover very large geographic areas. Though the USEPA has not been dissatisfied with our progress in developing and adopting TMDLs, many feel that we need to find ways to more quickly complete them. Since the most difficult portions of the most difficult TMDLs have been or are close to completion, more efficient completion of TMDLs is likely in the future; but the resource drain of implementing TMDLs described above may offset this efficiency. Staff intends to improve efficiency by developing more comprehensive TMDLs – i.e., TMDLs that address multiple parameters over entire watersheds. Examples include TMDLs for multiple dissolved oxygen impairments in Stockton area sloughs and South Delta channels and use of a comprehensive approach for addressing pesticide impairments throughout the Sacramento and

San Joaquin Valley. More information for specific TMDLs currently under development can be found by clicking on the TMDL of interest on the impaired water body page of our website at:
http://www.waterboards.ca.gov/centralvalley/programs/tmdl/index.htm

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